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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,016	06/24/2003	Benjamin Frydman	376462001700	5694
7590		01/11/2005	EXAMINER	
Robert K. Cerpa		FEDOWITZ, MATTHEW L		
Morrison & Foerster LLP		ART UNIT		
35th Floor		PAPER NUMBER		
555 W. 5th Street		1623		
Los Angeles, CA 90013		DATE MAILED: 01/11/2005		

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/606,016	FRYDMAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Matthew L. Fedowitz	1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7, 8, 11-13 and 15 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 9, 10, 14 and 16-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

### DETAILED ACTION

Claims 1-20 are pending in this action.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 7, 8, 11-13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Basu *et al.* (WO 00/66587). Basu *et al.* disclose polyamine–porphyrin conjugates (see page 60 Table 2) known as SL-11162, SL-11164, SL-11177 and SL-11184 that are directly anticipatory to the claims mentioned above.

As relating to claim 1, the polyamine–porphyrin conjugates in Table 2 correspond to the porphyrin pharmacophore of the claim as well as the groups originating from J<sub>1</sub> and J<sub>2</sub>. For example, if B were a nonentity, A as a C<sub>2</sub> alkyl, x as 1, G as a group consisting of -(C=O)-N(P)-, B as a nonentity, A as a C<sub>4</sub> alkyl, m as 1, P as H, B as a nonentity, A as a C<sub>4</sub> alkyl, n as 3 or 4, K as a C<sub>2</sub> alkyl and the remaining members of J<sub>1</sub>-J<sub>8</sub> as C<sub>1</sub>-C<sub>2</sub> alkyl groups, the applicant's formula would be anticipated by the polyamine–porphyrin conjugates in Table 2. Claim 2 is anticipated by the polyamine–porphyrin conjugates in Table 2 in the same manner as claim 1. Claim 3 is anticipated by the conjugates of Table 2 where G is -(C=O)-N(P)-. Claims 3 and 5 are anticipated by the conjugates of Table 2 where A and B, if present, are selected from C<sub>1</sub>-C<sub>4</sub> alkyl

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groups as demonstrated above. Claims 7 and 8 are anticipated by the conjugates of Table 2 in the same manner as claim 1 above with the proviso for claim 7 that J<sub>3</sub>, J<sub>4</sub>, J<sub>5</sub>, J<sub>6</sub>, J<sub>7</sub> are independently methyl or ethyl. Claim 11 is anticipated by the conjugates of Table 2 where J<sub>1</sub> and J<sub>2</sub> are a group consisting of a C<sub>2</sub> alkyl, G as a group consisting of -(C=O)-N(P)-, C<sub>4</sub> alkyl, P as H, B as a nonentity, A as a C<sub>4</sub> alkyl, n as 3 or 4, and K as a C<sub>2</sub> alkyl. Claim 12 is anticipated by the conjugates of Table 2 in the same manner as claim 11. Claim 13 is also anticipated in the same manner as claims 11 and 12 where P<sub>2</sub> is H and f is 3-4. Table 2 also anticipates claim 15 because all the compounds disclosed by Basu *et al.* have identical groups in the J<sub>1</sub> and J<sub>2</sub> positions.

### ***Claim Objections***

Claims 4, 6, 9, 10, 14, 16-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Reasons for Allowance***

Should applicant decide to submit claims objected to *supra* in independent form with all of the limitations of the intervening claims, these claims will be allowable for the following reasons.

I. The primary reason for allowance of claims 4, 16, 17 and 18 is the inclusion of the limitation requiring the attachment of the Q moiety at K. The prior art fails to teach or fairly suggest an attachment of this nature.

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II. The primary reason for allowance of claims 6, 9 and 10 is the inclusion of the limitation requiring at least one A substituent to comprise a cyclopropane group; at least one B-A-B unit to comprise a cycloalkyl moiety and at least one B-A-B unit to comprise a cyclopropyl moiety. The prior art fails to teach or fairly suggest attaching moieties of this nature to porphyrins.

III. The primary reason for allowance of claim 14 is the inclusion of the limitation requiring both  $J_1$  and  $J_2$  to be identical. The requirement of both  $J_1$  and  $J_2$  being identical, in view of the claims upon which it is dependent, when considered as a whole are not taught or fairly suggested in the prior art.

IV. The primary reason for allowance of claims 19 and 20 is the inclusion of the limitation requiring the attachment of the claimed structure at K. The prior art fails to teach or fairly suggest an attachment of this nature.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Matthew L. Fedowitz whose telephone number is (571) 272-3105 and can be reached between 9am-5:30pm (EST) M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Mr. James O. Wilson, can be reached on (571) 272-0661. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

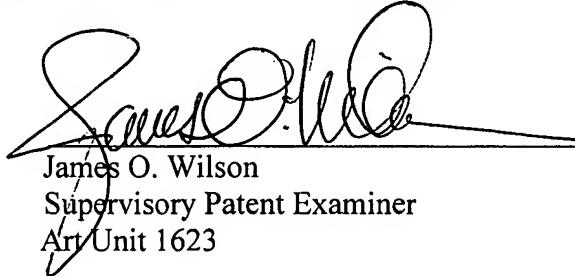
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Matthew L. Fedowitz, Pharm.D., J.D.  
December 6, 2004



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James O. Wilson  
Supervisory Patent Examiner  
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